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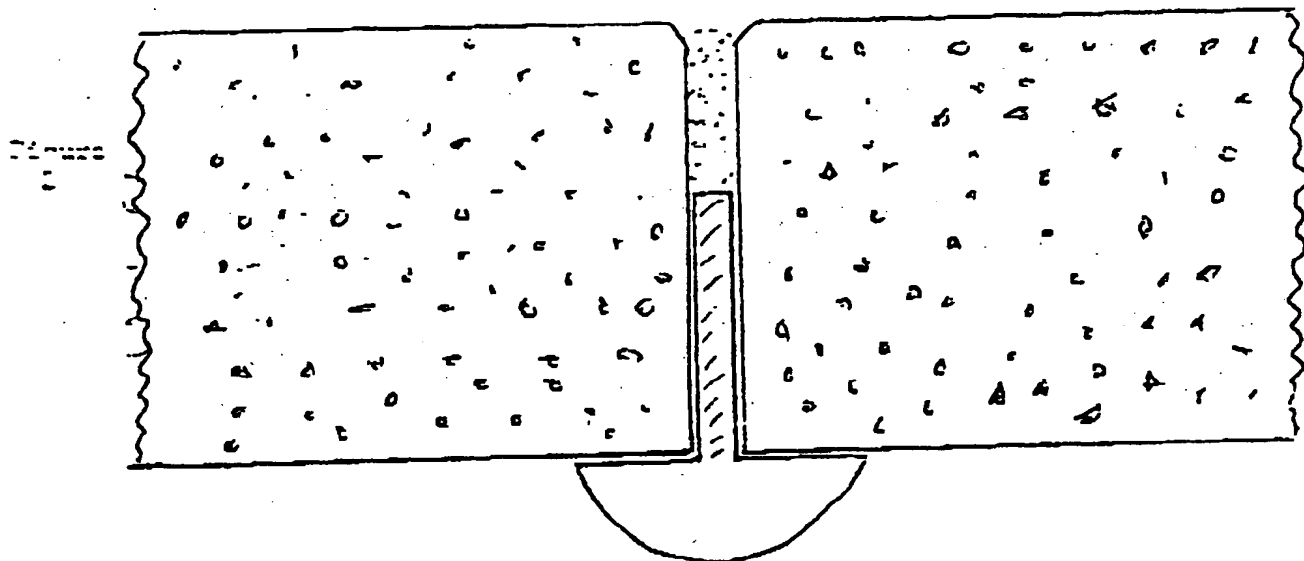
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## (54) Stabilising joint strip for pavement

(57) A stabilising joint strip for pavement is made of slightly flexible non-degradable thermo-plastic material which may be reclaimed scrap, for example polyvinyl chloride. The strip is of generally inverted T section so that, during laying of the slabs, the flanges can be inserted beneath the edges of adjacent slabs. The lower face of the device may be convex, concave, triangular or flat.



## STABILISING JOINT STRIP FOR PAVEMENT

### 1. PROBLEM

- 1.1 There is evidence and experience that individuals trip and fall at paving flag vertical edge protrusions as little as 1/8" high. Such protrusions include those of inspection chambers, manhole and toby inset into pavings and are prolific.
- 1.2 The Blind and poor sighted persons are particularly at risk.
- 1.3 Previously, the applicant (George Appleby) has suggested to the local Government that all flagstone edges should be chamfered/bevelled. Smaller chamfered/bevelled flags are now being laid in certain locations.
- 1.4 Earth, sand, cement and other materials upon which paving flags are laid, move with changing climatic and other conditions. Consequently protrusions appear.
- 1.5 Paving flags linked by dowelling, stepping or interlocking split or crack because of movement whether caused by a load or other conditions.

### 2. FUNCTION OF DEVICE FOR WHICH PATENT IS BEING APPLIED

- 2.1 Minimise vertical misalignment by transfer of load between courses of paving flags as illustrated in Figure 2 (convex base, alternative bases are wedge, flat or concave).

### 3. SOLUTION

- 3.1 Material less dense than earth, sand, cement and other foundation material, will tend to remain on top.
- 3.2 There is much scrap polyvinyl chloride (pvc) and other non-degradable thermo-plastic which after primary use, can be reclaimed directly by 'MUNCHIE' machin made by Extrudaids Ltd., Lewknor, Oxfordshire, e.g. used magazine envelopes and shopping bags.

2

- 3.3 Preliminary tests using a domestic freezer have shown that used thermo-plastic material remains plastic at sub-zero (centigrade) temperatures.
- 3.4 A slightly flexible support which will remain in an installed position is needed at flag paving butt joints. Such support may be needed laterally only i.e. across the normal line of walking along any pavement surface.
- 3.5 The colour of the support is not critical because it would be covered by the paving and infill.
- 3.6 Produce a slightly flexible strip which has a convex, wedge, flat or concave base and vertical rib/web (Figures 1, 3, 4 and 5).

#### 4. PRODUCTION

- 4.1 Recycle Polyvinyl Chloride (pvc) or other suitable extrudable material using a cleaner and 'MUNCHIE' (taper barrel) type extruding machine continuously through a selected die the orifice shape of which, matches the cross-section of the strip required.
- 4.2 The alternative cross sections are shown (Figure 1, convex base; Figure 3, wedge base; Figure 4, flat base; Figure 5, concave base), each with a similar vertical rib/web.

#### 5. INSTALLATION

- 5.1 Lay the first course of paving flags laterally on earth, sand, dolomite or other chosen foundation material.
- 5.2 Cut a length of stabilising joint strip to equal the lateral width of the paving course. (Note-longitudinal strips may also be desirable).

3

- 5.3 Press half of the stabilising joint strip base laterally along the underside edge of the first course of flags.
- 5.4 Lay the second course of flags on the other half of the stabilising joint strip base, malleting them against the vertical rib/web of the strip.
- 5.5 Infill the remaining depth of gap between contiguous flags with sand/cement/mixture.

- 4 -

## CLAIMS

1 A stabilising joint strip for pavement is a means of minimising vertical misalignment by transfer of load between courses of pavement flagstones.

2 A stablising joint strip for pavement when installed with pavement flagstones which are chamfered/bevelled along the upward facing (topside) edges, will reduce substantially the possibility of pedestrian tripping and falling.

Figure 1

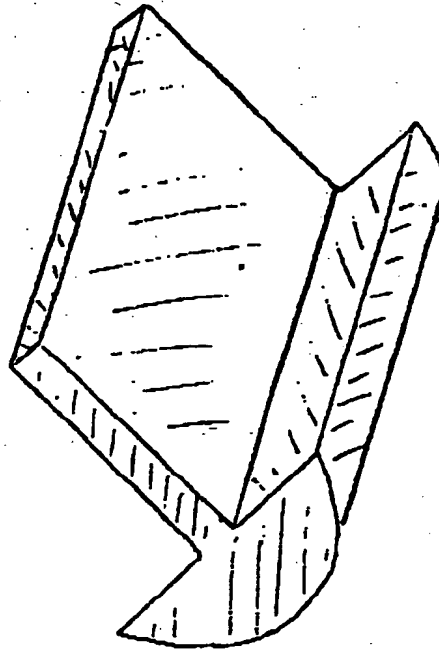


Figure 2

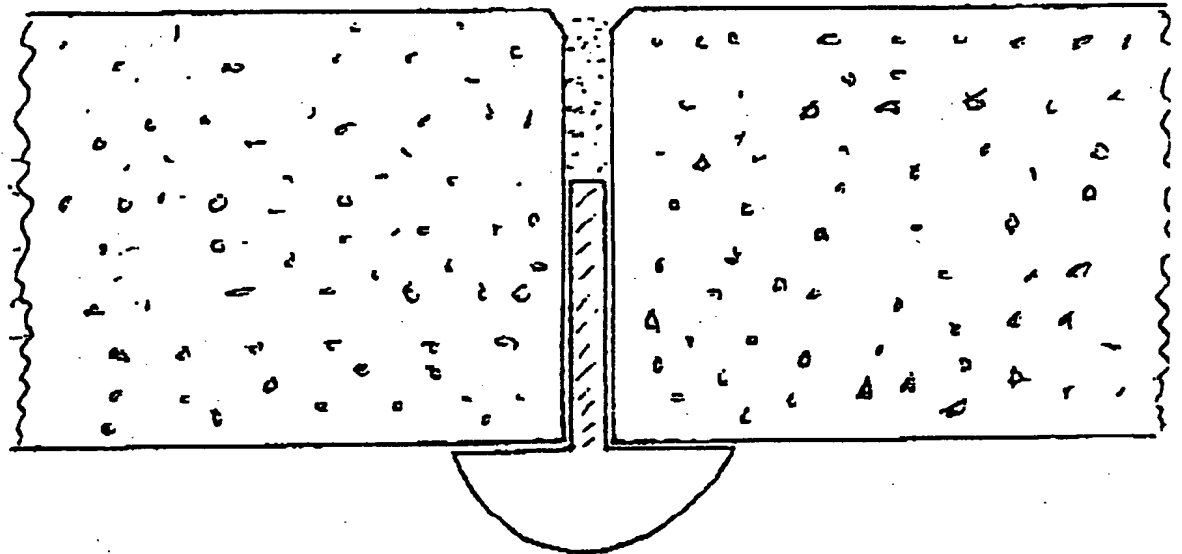


Figure 3

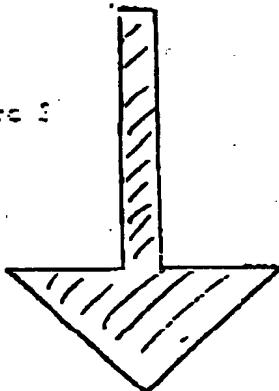


Figure 4

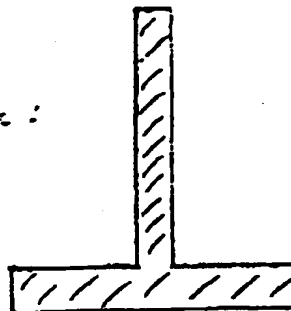


Figure 5

